UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/852,611	05/09/2001	Jerold Shan	HP-10007924	4891

7590 01/05/2006	EXAMINER
HEWLETT-PACKARD COMPANY	REAGAN, JAMES A
Intellectual Property Administration	

ART UNIT	PAPER NUMBER
3621	

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DATE MAILED: 01/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	09/852,611	SHAN ET AL.
	Examiner	Art Unit	
	James A. Reagan	3621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE **3** MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>31 October 2005</u>.

2a)☒ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1,4,6-10,13 and 15-41</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1,4,6-10,13 and 15-41</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☐ Notice of References Cited (PTO-892)	4)☐ Interview Summary (PTO-413)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)	5)☐ Notice of Informal Patent Application (PTO-152)
Paper No(s)/Mail Date _____.	6)☐ Other: _____.

DETAILED ACTION

Status of Claims

1.   This action is in response to the amendment filed on 31 October 2005.

2.   Claims 2, 3, 5, 11, 12 and 14 have been cancelled.

3.   Claims 1, 8, 10, 15 and 17 have been amended.

4.   Claims 19-41 have been added.

5.   Claims 1, 4, 6-10, 13, and 15-41 have been examined.

RESPONSE TO ARGUMENTS

6.   Applicant's arguments received on 31 October 2005 have been fully considered but they are not persuasive. Referring to the previous Office action, Examiner has cited relevant portions of the references as a means to illustrate the systems as taught by the prior art. As a means of providing further clarification as to what is taught by the references used in the first Office action, Examiner has expanded the teachings for comprehensibility while maintaining the same grounds of rejection of the claims, except as noted above in the section labeled "Status of Claims." This information is intended to assist in illuminating the teachings of the references while providing evidence that establishes further support for the rejections of the claims. Applicant's arguments with respect to claims have been considered but are moot in view of the new ground(s) of rejection.

Allowable Subject Matter

7.   Claims 8 and 17 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim Rejections - 35 USC § 103

8.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as
set forth in section 102 of this title, if the differences between the subject matter sought to be
patented and the prior art are such that the subject matter as a whole would have been obvious
at the time the invention was made to a person having ordinary skill in the art to which said
subject matter pertains. Patentability shall not be negatived by the manner in which the invention
was made.

9.   Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cortes et al. (US

6,480,844 B1) in view of Scroggie et al. (US 5,970,469 A).

Examiner's Note: The Examiner has pointed out particular references contained in the prior art

of record within the body of this action for the convenience of the Applicant. Although the

specified citations are representative of the teachings in the art and are applied to the specific

limitations within the individual claim, other passages and figures may apply. Applicant, in

preparing the response, should consider fully the entire reference as potentially teaching all or

part of the claimed invention, as well as the context of the passage as taught by the prior art or

disclosed by the Examiner.

Claims 1, 10, and 35:

Cortes discloses the following limitations:

- *storing customer profile information corresponding to a plurality of on-line
shoppers;*

- *storing customer web log information corresponding to the plurality of on-line
shoppers;*

- *storing promotion attributes corresponding to a plurality of sales promotions that have been offered;*

- *inputting the customer profile information the web log information and the promotion attributes into a model for simulating shopping behavior as a function of the customer profile information and the promotion attributes;*

- using the model to target delivery of future sales promotions.

Cortes does not specifically disclose that the database files are specifically for online shoppers, that their habits are logged, or that the database contains product information and incentives. Scroggie, however, in at least the abstract as well as other relevant text discloses these limitations. It would have been obvious, therefore, to one of ordinary skill in the art at the time of the invention to apply the data mining principles and regression analysis techniques of Cortes with Scroggie's data concerning online shopping because the results would provide a model for predicting online shopping behavior, thereby maximizing profits.

Claims 4, 13, 36, and 37:

With regard to the limitations of:

- *the model comprises a logistic regression model;*

- *a step of using the mathematical model to target delivery of future sales promotions;*

- *a step of using the mathematical model to tailor sales promotions to individual shopper;*

See at least Cortes column 7, line 47.

Claims 6 and 15:

The combination of Cortes/Scroggie discloses the use of regression analysis techniques as applied to online consumer purchasing as shown in the rejections above. Cortes/Applicant do not specifically disclose that *the model is partially based on traditional logistical regression theory*

and partially on the maximum utility theory. However, the Examiner takes **Official Notice** that

these variations of logical regression analysis are old and well-known in the statistical analysis

arts as well as the survey and marketing arts. It would have been obvious, therefore, to one of

ordinary skill in the art at the time of the invention to combine the data mining principles and

regression analysis techniques of Cortes with the established use of traditional logistical

regression analysis and maximum expected utility models theory analysis because they provide

insight to customer spending habits that may be extrapolated and used to maximize profits and

product throughput.

Claims 7, and 16:

The combination of Cortes/Scroggie discloses the use of regression analysis techniques

as applied to online consumer purchasing as shown in the rejections above. Cortes/Applicant do

not specifically disclose:

- *customer profile information includes age, sex, religion, income, ethnicity, marital*
  status, geographical location, number of children, interests, hobbies, spending
  habits, and zip code.

However, the Examiner takes **Official Notice** that these attributes and parameters are

old and well-known in the demographic utilization arts as well as the survey and marketing arts. It

would have been obvious, therefore, to one of ordinary skill in the art at the time of the invention

to combine the data mining principles and regression analysis techniques of Cortes with the

established use of demographics and online activities of consumers because they provide insight

to customer spending habits that may be extrapolated and used to maximize profits and product

throughput.

Claims 9 and 18:

Cortes discloses the use of regression analysis techniques as applied to online consumer

purchasing as shown in the rejections above. Cortes does not specifically disclose that *the*

promotion attributes include one of sales, upgrades, extended warranties, buy-one-get-one free, financing packages, free options, rebates, coupons, donations to charities, and free gifts. However, Applicant, in the background of the specification discloses the features as already prevalent in the art. It would have been obvious, therefore, to one of ordinary skill in the art at the time of the invention to combine the data mining principles and regression analysis techniques of Cortes with the Applicant's incentives for online shoppers because the results would provide increased purchasing thereby maximizing profits.

Claims 19-26, 27-34, and 36-41:

The combination of Cortes/Scroggie discloses the use of regression analysis techniques as applied to online consumer purchasing as shown in the rejections above. Cortes/Applicant do not specifically disclose:

- *using the model to tailor sales promotions to individual shoppers;*

- *sales promotions automatically are customized to a shopper based on customer profile information for said shopper;*

- *storing product information corresponding to a plurality of products offered for sale by the on-line vendor and inputting the product information into the model, and wherein the shopping behavior also is simulated as a function of the product information.*

- *using the model to compute a percentage likelihood that a shopper will be converted into becoming a*

- *purchaser;*

- *using the model to simulate a conversion of a shopper into a purchaser;*

- *using a simulator based on the model, varying promotion attributes input into the simulator, and then observing results generated by the simulator;*

- *continuously updating and improving the model based on new information;*

- *using an optimization engine to generate statistically driven sales promotion plans that have been optimized with respect to at least one objective function;*

However, the Examiner takes **Official Notice** that it is old and well-known in the commerce and transactional arts to use data models and simulations to forecast buyer behavior, as well as use an iterative process to continually update buyer data to increase profitability.

Any inquiry of a general nature or relating to the status of this application or concerning this communication or earlier communications from the Examiner should be directed to **James A. Reagan** whose telephone number is **571.272.6710.** The Examiner can normally be reached on Monday-Friday, 9:30am-5:00pm. If attempts to reach the examiner by telephone are unsuccessful, the Examiner's supervisor, **James Trammell** can be reached at **571.272.6712.** Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://portal.uspto.gov/external/portal/pair . Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at **866.217.9197** (toll-free).

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

571-273-8300 [Official communications, After Final communications labeled "Box AF"]

571-273-8300 [Informal/Draft communications, labeled "PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to the **United States Patent and Trademark Office Customer Service Window:**

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401 Dulany Street

Alexandria, VA 22314.

JAMES A. REAGAN

Primary Examiner

Art Unit 3621

03 January 2006